

**International Workshop
University of Trento, 17-18 April 2023**

**Dam scientists:
exploring the role of hard sciences in framing the environmental impact of dams**

Abstract

Dams are one of the most impressive symbols of human power over nature. They have been a distinctive feature of development in the 20th Century in most of the world, often sparking contestation and local resistance against local environmental and social consequences. Environmentalist movements, particularly in Western countries, contributed to a slowdown in the construction of dams during the 1970s and 1980s, but in the 1990s dam construction was again back on the scene in the framework of debates over climate change and the production of clean energy. The debate on the relationship between development, the need for clean energy, and environmental protection revolves around one big question: can we still consider dams as an effective tool for development in the 21st Century in spite of all the environmental and social drawbacks that their construction and operation entails?

Historians research dam-building from a variety of perspectives to shed light on the complex and variegated milieu within which dams are conceived, discussed, built, and on how they affect societies and the environment both culturally and materially. While scholars initially turned their attention to the political and economic forces driving dam development (Worster, 1985), a new set of approaches recently emerged. For example, attempts were made to go beyond the traditional dichotomy of nature/technology, emphasizing how environmental and technological systems are mutually shaped (Pritchard, 2011; Parrinello, 2018). Other historians analyzed how dam-building has driven cross-border cooperation and competition (Berg, Jacobsson, 2006; MacFarlane, 2014), whereas geographers and political scientists highlighted how hydraulic infrastructures could be used to enact social engineering strategies and showcase national strength (Menga, 2018; Hailu Woldegebrael, 2018). In recent years, historians of science and technology have started to interpret infrastructures, including dams, as places of knowledge production both in the natural and social sciences, in fields as diverse as geology, ethnography, engineering and ecology (Heine, Meiske, 2022). Reflections on the environmental impact of large infrastructural projects underpin a large part of this literature.

The concept of environment, and ideas about how to protect it, have changed over time. If we look at the development of Environmental Impact Assessment legislation, for example, we can clearly see a

shift from a focus on conservation, which encouraged its very inception the late 1960s in the US, to a focus on sustainable development in the early 1990s, when the idea that it was possible to pursue development while also protecting the environment became popular (Bond et al. 2020). Who contributes to this kind of evolution and how? To what extent do different historical and geographical contexts produce different understanding of the relationship between the environment and development, and to what extent do scientists and technical experts contribute to these different understandings?

This workshop seeks to answer these questions by analyzing case studies of dams from different geographical contexts and historical periods, focusing specifically on:

- Scientists' and technical experts' engagement with international organizations, donors, construction companies, consultancies and social movements involved in the promotion of, support to, or resistance against dam construction
- The role of scientists and technical experts in supporting the construction of dams as a tool of modernization and as a way of expanding central states' control over peripheries;
- The role of scientists and technical experts in framing the environmental impact of dams and their influence on decision-making processes.

This workshop is convened by the University of Trento research group in the framework of the research project "Inventing the Global Environment: Science, Politics, Advocacy and the Environment-Development Nexus in the Cold War and Beyond", coordinated by prof. Sara Lorenzini.

Abstracts should be no longer than 300 words and can be submitted to sara.desimone@unitn.it and francesco.magno@unitn.it by 30 November 2022.